

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Higher Ground LLC)	File No. SES-LIC-20150616-00357
)	
Application for a Blanket License to)	
Operate C-Band Mobile Earth Terminals)	

COMMENTS OF NEBRASKA PUBLIC POWER DISTRICT

Nebraska Public Power District ("NPPD"), a licensee of 6 GHz Fixed Point-to-Point microwave frequencies, **strongly opposes Higher Ground LLC's application and request for waiver of FCC rules** to allow operation of 50,000 mobile earth stations within the 6 GHz band. NPPD supports many of the prior comments given to the FCC on this issue from the Fixed Wireless Communications Coalition, CenturyLink, the State of Hawaii, Frontier Communications, and the National Spectrum Management Association.

The 6 GHz band is vitally important to NPPD's critical infrastructure communication network which among other things carries protective relaying (teleprotection) circuits and supervisory control and data acquisition (SCADA) circuits which are necessary for operation of the electrical system in the State of Nebraska. Information across this network is also supplied to our regulatory agencies and our electrical reliability regional coordinator for multi-state electrical operations. NPPD's microwave is also used to provide backhaul for the Nebraska statewide public safety two-way radio system, NPPD's corporate voice and data network, and physical security systems installed at critical infrastructure sites. NPPD has invested considerable dollars in these 6 GHz links and engineered them to a 99.999% minimum reliability.

NPPD had utilized the 1.9 GHz and 2.1 GHz fixed microwave bands in the past, which the FCC reallocated for Broadband PCS, Mobile Satellite Services, and Advanced Wireless Services. NPPD was displaced from these bands to make room for companies that provide consumer services similar to what Higher Ground LLC seeks to provide. NPPD invested in the 6 GHz band, as have many others, to replace the 1.9 GHz and 2.1 GHz fixed bands we were removed from to meet our needs for long-haul microwave communications to carry our critical infrastructure communications network.

It is common to construct high capacity, high reliability microwave paths that are 30 miles or longer in 6 GHz band. There is no other band available for high capacity, high reliability, long-haul microwave if the 6 GHz band is compromised by interference and congestion. In practice, a high capacity, 99.999% reliability path in the 11 GHz band is limited to around 15 miles and in

the 18 GHz band to less than 5 miles. Therefore it is critical to maintain the integrity of the 6 GHz band for long-haul communications. If Higher Ground LLC or others start using even a portion of the 6 GHz band it will lead to additional congestion in the remaining parts of the band (upper 6 GHz) as point-to-point licensees avoid interference concerns.

Higher Ground LLC has proposed to use a method of self-coordination to dynamically assign frequencies that lacks specifics about what checks and balances would be in place to prevent interference to fixed microwave. Intermittent interference caused by the Higher Ground devices would be very difficult to pinpoint and eliminate. This interference could be caused by malfunctioning consumer devices or by improper frequencies being assigned by the Higher Ground LLC System. Interference from Higher Ground LLC devices would have a direct impact on the reliability of our electrical system.

NPPD understands the importance of our communications in the 6 GHz band, and we would not entrust the entire coordination process to the potential interferer who has no understanding or concern for the electrical systems they may be affecting. NPPD strongly opposes opening up the 6 GHz point-to-point microwave band to consumer based mobile services that are already supported in other bands. It is well past time for the FCC to recognize the importance of providing and protecting spectrum for critical infrastructure communications.

Respectfully submitted,
Nebraska Public Power District
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